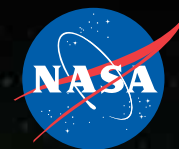


National Aeronautics and Space Administration



Roundup

LYNDON B. JOHNSON SPACE CENTER

February | 2012

A match made
in the heavens



Guest Column



NASA/JPL-CALTECH/UCLA

On the cover:

NASA's Wide-field Infrared Survey Explorer has a new view of Barnard 3, or IRAS Ring G159.6-18.5, that is awash in bright green and red dust clouds. Interstellar clouds like these are stellar nurseries, where baby stars are born.



NASA/BLAIR 615533MAIN_ORION_TESTING_FULL

Photo of the month:

Dr. Anita Sengupta and Donn Liddle of NASA are pictured in the low-speed wind tunnel at Texas A&M University, which is being used to test a scale model of the Orion spacecraft and its parachute system.

Orion, our next vehicle for human spaceflight exploration, has been making great progress across the country. Today, Orion's first orbital flight test vehicle, Exploration Flight Test 1 (EFT1) is being built at the Michoud Assembly Facility in New Orleans. EFT1 will test the entry, descent, landing and recovery systems at the speeds required for returning from deep space. The mission will also provide the opportunity for the three NASA exploration programs (Orion, Space Launch System and 21st Century Ground Systems) to work together on pre-flight, on-orbit, recovery and post-flight activities.

The ground test vehicle team recently completed acoustics testing, and additional environmental tests are now underway at Lockheed Martin in Denver. Nine successful water drop tests were conducted at the Langley Research Center Hydro Impact Basin to demonstrate different water



NASA/PHOTO

After six months of testing, an 18,000-pound Orion mock-up takes a splash into NASA Langley Research Center's Hydro Impact Basin on Jan. 6.

landing conditions that Orion may face when landing in the Pacific Ocean. The avionics team is successfully running critical software in our avionics labs. A series of successful chute tests were successfully conducted in Yuma, Ariz., testing the parachute system for landing in different scenarios. We verified the successful operation of Orion's next-generation docking sensor aboard STS-134. The team at Glenn Research Center completed the Space Environmental Test Facility, which provides one-stop spacecraft environmental testing. And work is well underway at the Orion factory, the Kennedy Space Center Operations and Checkout Facility, where the spacecraft will be assembled.

We completed our final Program Technical Review for the EFT1, and the test was approved. We look forward to a busy year ahead. Our primary focus in 2012 is to complete the Orion exploration flight test vehicle.

We will face many challenges, both technical and programmatic, this year. It's critical that we continue to find innovative ways to develop the Orion system more efficiently to enable the earliest possible human exploration missions and to keep the United States a leader in space exploration.

I invite you to follow Orion's progress on nasa.gov, the JSC internal Web page, Facebook and Twitter:

<http://www.nasa.gov/orion>

<http://mpcv.jsc.nasa.gov>

<http://www.facebook.com/NASAO Orion>

http://twitter.com/NASA_Orion



NASA/PHOTO JSC2008a118451

Mark Geyer
Manager, Multi-Purpose
Crew Vehicle Program

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http://twitter.com/NASA_Orion

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2012 JSC Strategic Implementation Plan



By Catherine Ragin Williams

All successful businesses have them, and many experts say one would be hard pressed to achieve much without a plan of action, or goals. As we embark on this new year, it is safe to say that Johnson Space Center has resolved to stay a premier human spaceflight center. We will accomplish this, and more, by following the recently published 2012 Strategic Implementation Plan.

"Every few years we have gone back and looked at our Strategic Plan, to see if it was up-to-date," said JSC Director Mike Coats. "This year I think it was especially important because we have had an awful lot of changes at NASA—obviously with the new administration, end of the shuttle program (and) cancellation of the Constellation Program."

With support from Congress and our new direction with future programs, JSC must adapt with the changing times and emerge stronger for it. For months, senior staff members have come together to hammer out an updated charter that addresses how we will keep our center relevant in this current reality.

"The message that we want to get out to the folks is (that) we are looking forward, we are not looking back," Coats said. "We are awfully proud of what we've done for the last 50 years, and certainly for the 30 years of flying the space shuttle. But it is our job to continue to make history, not just replay history."

Though we're given a fixed budget to work with, "we must come up with an affordable, sustainable space exploration program," Coats said.

The plan focuses on building upon international involvement, as we have shown can be attained through the successes of the International Space Station Program. JSC has also shown prowess in innovation through Orion and Advanced Exploration Systems technologies already in development.

By taking the time to take a closer look at the 2012 Strategic Implementation Plan, JSC team members will get a feel for the direction JSC is headed—and exactly how each person on the team fits into that puzzle. No one is excluded from this very in-depth charter. We all have a role in sculpting the future of space exploration, and this plan is the first step of many to getting there.

An overview of the plan

Vision

Declaration of our future

JSC leads a global enterprise in human space exploration that is sustainable, affordable and benefits all humankind.

Mission

Our value proposition

JSC provides and applies the preeminent capabilities to develop, operate and integrate human exploration missions spanning commercial, academic, international and U.S. government partners.

To read more about all things strategic, visit:

<http://strategicplan.jsc.nasa.gov/>

2012 Strategic Implementation Goals

- Goal #1: Lead human exploration
- Goal #2: Lead internationally
- Goal #3: Excel in leadership, management and innovation
- Goal #4: Expand relevance to life on Earth



New partnership brings **survival training** to the **NBL**



By Rachel Kraft

Visitors to the Neutral Buoyancy Laboratory (NBL) go to get a glimpse of astronauts training for spacewalks and to check out the 6.2-million-gallon pool. But those who head over to the facility this year will see new training taking place.

On Dec. 8, 2011, in a corner of the gargantuan pool, a mock helicopter cabin poised a few feet above the water's surface, filled with people in helmets and red jumpsuits, slowly submerges. Just under water, the people inside the cabin push out windows and doors and then swim to

Several years ago, when facing the inevitable end of the Space Shuttle Program, completion of the International Space Station and the subsequent need for fewer spacewalks, Mission Operations Directorate (MOD) management set out to determine how to continue using the NBL. According to MOD Deputy Director Stephen Koerner, it culminated in late 2010 with the awarding of the NBL and Space Vehicle Mockup Facility Operations Contract to Raytheon. The agreement enabled Raytheon to seek external customers for the NBL.



NASA/PHOTO JSC2011E215545

Survival training team members prepare to enter the partially submerged cabin.

the surface. The exercise, called Helicopter Underwater Egress Training (HUET), is the result of a new partnership between NASA, Raytheon and Petrofac to begin using the NBL's unique capabilities as a training resource for commercial entities.

"As part of the NBL contract, we're responsible for the commercialization of those assets within NASA, with the goals of maintaining jobs and the skill base in Houston for future human spaceflight, promoting the government partnership with industry and leveraging this world-class facility to provide survival and other types of training," said David Appel, director of operations, training and logistics for Raytheon Technical Services Company.

Opening the facility for purposes outside the agency's mission is a prudent use of NASA infrastructure given the recent changes to human spaceflight, but it initially posed some concerns.

"There was a sense of nervousness that we couldn't bring in just anybody," Koerner said. "Fifty years of experience has enabled us and allowed us to develop a culture that is focused most importantly on safety. Arguably, one of the most dangerous things we do here at Johnson Space Center is in [the NBL], so attention to detail and meticulously checking over procedures and processes to make sure you maintain a safe environment is paramount. As we worked with Raytheon to bring in external customers, we wanted to make one thing clear, and that is everyone on our team knows that safety is paramount."

Both Raytheon and Petrofac, which provides business solutions for the oil and gas industry, have strong commitments to safety and reliability that



NASA/STAFFORD JSC2011E215527

Participants in lifejackets, helmets and jumpsuits listen to instructions in the mockup cabin during HUET training.

(continued on page 12)

Space Shuttle Program closes out



By Neesha Hosein

The official end date of the Space Shuttle Program (SSP) has come and gone, but there is still much to do to fully transition and retire what remains of the program. Large quantities of hardware, records, Information Technology and software must be processed before the last vestiges of the SSP are officially closed out.

"This program spanned decades, where the technology involved changed dramatically," said Kevin Templin, lead, Transition Office, Space Shuttle Program Transition and Retirement. "We started out with vellums and drawings, and now we have computers and CAD (Computer-Aided Design). So we've got a range of things we've got to look at here. There are certain things that are classified as records that have to go to the National Archive; things that are contract related and have to be retained for periods of time as dictated by federal acquisition regulations."



NASA/PHOTO JSC2011E218058

Here, workers prepare the FFT for its new home.

Transition planning actually began in 2005. With more than one million line items of property to deal with, a great deal of pre-planning was necessary.

"I think the most visible piece of property that everybody's heard about is the orbiters," Templin said. "There are other artifacts that people have expressed interest in as well. Not everyone can afford to house an orbiter, but everybody would like to have a space artifact. When you talk about transition and retirement, property tends to be what everybody focuses on because that's what you see."

Templin said NASA centers, museums and universities pre-screened property that was deemed to be artifacts. Items unclaimed during the pre-screening process will eventually be excessed through the government property dispositioning process.

Shuttle parts find new homes

During a ceremony held at Johnson Space Center last December, the president of Texas A&M University signed an agreement that finalized the adoption of the Shuttle Mission Simulator (SMS). Texas A&M intends to reassemble the SMS and use it as a functional part of their aerospace engineering program.

As for the orbiters, *Discovery* will go to the National Air and Space Museum in April. *Enterprise* will be taken out of the Air and Space Museum and flown to New York, where it will eventually be housed at the Intrepid Sea, Air & Space Museum. *Endeavour* will go to the California Science Center in September. *Atlantis* will move to the Kennedy Space Center Visitor Complex in the November time frame.

"Orbiter deliveries to the display sites are going to be important and very visible milestones associated with transition and retirement, but we've got a lot of the property being processed out of the program every month," Templin said. "What we've done with our property was go to other programs first. We started with Constellation when they were in business, and now we've been working with the Space Launch System, Orion and space station and a number of smaller projects. As stewards of the taxpayers' money, technical reuse is our



PHOTO: SPACE SHUTTLE PROGRAM TRANSITION AND RETIREMENT OFFICE

Texas A&M University took possession of the Shuttle Mission Simulator, pictured here. They will use it in their aerospace engineering program.

goal for much of the space shuttle hardware, so we're trying to find places where items can be reused."

JSC officially handed over the "keys" to the Space Shuttle Full Fuselage Trainer (FFT) to the Seattle Museum of Flight during a ceremony on Jan. 19. The ceremony included an official signing of the Space Act Agreement that transferred ownership of the trainer, which includes both a crew cockpit and shuttle cargo bay area. The FFT was used to familiarize astronauts with shuttle cockpit controls and emergency exit procedures throughout the life of the SSP.

By donating JSC's shuttle training resources to outside partners, NASA hopes to find areas of common interest that will foster new technologies and pave the way for future human exploration in space.

What is left?

Transition officially began in August 2011, when the operational phase of the SSP ended. The Space Shuttle Program Transition and Retirement Office is focused on placing requested hardware, archiving records, closing out shuttle contracts and a myriad of remaining tasks that are the remnant of this 30-year era.

A match made in the heavens

Johnson Space Center and Space Center Houston partner to share our spaceflight story



By Catherine Ragin Williams

Just because Space Shuttle *Atlantis*' wheels came to a stop does not mean that Johnson Space Center did. But to the general public, the image created by our rocket ships in "green pastures" may have given that impression.

"(With the) retirement of the orbiter fleet, many people had the misconception that there is nothing else going on and doors are shutting," said Anson Brantley, Space Center Houston operations manager. "After wheels stop of STS-135, we recognized (this) immediately, and from that moment on have committed our resources and energy to focus on JSC's role in continued space station operations, development of the Orion spacecraft and other projects such as the Space Exploration Vehicle and advanced rovers."

Fortunately, senior leaders at JSC and Space Center Houston were quick to realize that we had a job to do: reframe our spaceflight story for the community—and fast.

Nebulous plans

Late summer last year, a working group came together to give a perspective on how Space Center Houston exhibits and tram tour stops could be improved to better relay our evolving missions to the public. An initial area identified was the Space Vehicle Mockup Facility, which would speak more to our current mission with the International Space Station (ISS) and future missions beyond low-Earth orbit.

Also approved was the conversion of the no longer used Shuttle Avionics Integration Laboratory (SAIL) into an exciting tram tour stop, which would honor the history of the Space Shuttle Program while giving visitors an exclusive insider's look into the avionics work done for each shuttle mission.



NASA/PHOTO JSC2012EO19269

Enhanced lighting effects put the focus where it needs to be: on the mock-ups below in the Space Vehicle Mockup Facility.

"There are engineers working on the Orion mock-ups constantly, engineers working with robotics. They have major testing going on with the rovers and the equipment they have to simulate future missions to an asteroid or the moon or Mars, and that's something we haven't really showcased before."

Although the shuttle mock-ups will remain in Building 9 until this spring, updates were made to address the mostly shuttle-centric displays that used to dominate the visitor areas. In the lobby, an Orion model was added to complement the station model already there. Large, wall-sized images were affixed to represent what visitors would see upon going to the catwalk. The video running for guests in the lobby was also updated, and now gives a comprehensive look at what is in the building. Even the Space Center Houston tour guides got revamped scripts to reflect the changing spaceflight storyline.

Lighting was also improved in the catwalk to properly set the scene for the dynamic training that could be glimpsed below.

"Changing the lighting changed the atmosphere and made a big difference," Clem said. "Every other light is turned off, and the remaining ones are covered in a blue gel overlay ... so it has this blue hue to it. It really tones down the lighting in there and also makes the focus on the high bay area."

The group is working to add monitors that display videos inside the catwalk, so that when activity isn't happening in Building 9, such as on weekends, visitors will still be able to see our preparations for what lies ahead.

"Space Center Houston serves more than 700,000 guests each year—and nearly 500,000 of their guests take the tram tour," said Mike Kincaid, director, JSC External Relations. "It's their most popular attraction. It's great that Space Center Houston and JSC are working together to better tell our story of what we're doing now and in the future. We need our Space Center Houston guests to leave JSC with a sense of the things we're working on now: International Space Station, Orion, robotics and rovers."



NASA/PHOTO JSC2011E074815

The SAIL facility before its conversion into a future tram tour stop.

Space Vehicle Mockup Facility

To begin, the working group participated in a tram tour to get the visitor's point of view.

"Seeing the future in action is new for a lot of people," said Kylie Clem, JSC Newsroom manager and member of the working group.

Shuttle Avionics Integration Laboratory

SAIL is also a coming attraction to visitors at Space Center Houston, and a lot of work is being put into its extreme makeover.

"When you walked into the SAIL, (it) really just looked like a bunch of avionics," said Beth LeBlanc, JSC Exhibits manager.

Installing huge graphics will help guests visualize the orbiter past its maze of wiring and electronics. In addition, alterations are being made to the multi-level facility so that visitors will be able to peer down safely into the immense payload bay.

"When they built SAIL, they weren't thinking in terms of the public coming through," LeBlanc said. "A lot of the avionics are behind closed doors, so we're having to remove doors ... put up Plexiglas, for example."

Center Operations is also swooping through the facility to ensure that everyone, including those with disabilities, will be able to access the wonders of SAIL with specially installed ramps. And of course, safety is the foremost consideration with all the updates being initiated.



NASA/PHOTO JSC2012E019189

Construction and fabrication work is being done in SAIL to make it ready for its debut to Space Center Houston visitors.

'Big Bang' for the buck

But that's not all.

"We have many upgrades and improvements that we have already implemented and several more in the works," Brantley said. "We are very excited that we are now showing JSC-produced HD movies in our giant theater. These movies are 'Destination Station,' which emphasizes the present and future, and 'Space Shuttle: Launching Our Dreams,' which emphasizes the 30-year legacy."

Also coming is a brand-new film "On Human Destiny," which will include the last 10 years of shuttle, the completed assembly of the space station and a look into the future of human spaceflight.

In addition, "new, permanent ISS and Orion/Space Launch System exhibits will complement our growing collection," Brantley said.

The biggest wow factor of 2012 may just be the life-sized shuttle replica that used to be housed at Kennedy Space Center (KSC).

"The replica is already being prepared to be barged from KSC via the intercoastal waterway," Brantley said. "We hope to have the shuttle here by June and open to the public by the end of September."

Space Center Houston will hold a national competition to rename



PHOTO CREDIT: PGAL ARCHITECTS

A perspective rendering of Space Center Houston with its newest and biggest addition: a full-scale mock-up of an orbiter. The orbiter used to belong to the Kennedy Space Center.

it, as well as construct a major addition to the visitors' center that will allow the public to enter the shuttle and look straight into the flight deck and payload bay.

A relationship built on common ground (and space)

Showing the community our growth is something JSC and Space Center Houston do not take lightly.

"It will always be an ongoing effort," Clem said. "I think we're building our relationship so that we can stay in tune with what updates need to be done regularly."

After all, this nation's spacefaring program will always be heavily influenced by the court of public opinion.

"Our goal is to make sure the public knows that there are many exciting things in the works here at JSC, and manned spaceflight continues," Brantley said.



NASA/PHOTO JSC2012E019268

New graphics representative of JSC's current projects and an updated introduction video greet Space Center Houston guests in the Building 9 lobby.

Ambient Pressure Integrated Suit test launches **new era** for spacesuits



By Dan Huot

As NASA moves forward in its pursuit of human exploration beyond low-Earth orbit with Orion and the Space Launch System, engineers at Johnson Space Center are hard at work developing the spacesuits and life-support systems that will protect astronauts on their future journeys. The next booted step was accomplished with a first round of tests for the Ambient Pressure Integrated Suit.

For the first time since the Apollo Program, a closed-loop system, which provides oxygen and recycles exhaled gas, was put through the trials necessary to develop the next generation of crew survival hardware that will safeguard astronauts on extended trips through space.

The life-support system consists of an air revitalization loop to maintain air quality, a pressure control system to provide make-up gas and maintain the loop pressure and a fan to provide air flow through the system. There are beds in the loop to remove carbon dioxide, moisture and trace contaminants expelled by the crew as the air is recirculated.

"The suits are to be worn by the crew during major mission events such as launch, entry or docking with another vehicle," said Project Manager Richard Barido. "Should a major malfunction occur that results in a loss of cabin atmosphere, the suits are connected to the closed-loop air revitalization system, which keeps the crew pressurized and supplied with clean recirculated air."

These new suits, like the Advanced Crew Escape Suit (ACES) system on the shuttle, protect astronauts in the event of an emergency situation, making these suits an integral part of the life-support systems that will be aboard the new Orion spacecraft. The major deviation from a shuttle configuration will be the extended amount of time a crew may have to stay inside the suit, making conservation of resources like oxygen vital and necessitating the closed-loop system.

NASA engineers used modified ACES suits, which were converted from the Space Shuttle Program, to accommodate the need for



NASA/MARKOWITZ JSC2011E205372

The full test and support team stands in front of the vacuum chamber in Building 7.

a closed-loop system. They also employed a Pressure Garment Assembly Test Article suit, which was developed over the past few years to meet the new exploration standards. These different arrangements provide invaluable insight to help guide the designers of the final suit architecture.

"The ambient tests are the first closed-loop proof-of-concept tests performed with humans," Barido said. "There have been concerns about how pressure fluctuations inside the loop would affect the crew. Test subject feedback indicated that the pressure effects of the amine swing bed and from human movement in the suit, while noticeable, were not detrimental."

The team completed 32 test points over seven days, determining the effect on suit pressure control based on where sensing points were located within the closed loop and the crew's position and motion. They also received feedback from test subjects on how low humidity levels within the suit loop had no negative effects on the subjects. This collection of data will provide reference points to engineers as they move forward with designing the future life-support system.

"This test is the first of a series of development tests planned over the next few years," Barido said. "The second phase, currently in planning for late August, is to be a reduced-pressure test. For this phase of testing, the 11-foot chamber will be closed and the pressure inside reduced to 10.2 PSIA (Pounds per Square Inch Ambient) to simulate the Orion Multi-Purpose Crew Vehicle operating pressure. The final phase of testing, currently planned for August 2013, will be performed at vacuum conditions (less than 0.1 PSIA). With each phase of testing, the plan is to incorporate other development hardware and possibly higher fidelity hardware than we have now."



NASA/BLAIR JSC2011E205074

During the test, subjects wearing the modified ACES suits are monitored standing and sitting in an Orion mock-up seating harness to simulate the conditions the spacesuits will ultimately face.

Photographing the International Space Station from your own backyard



By Lori Keith

Photographing the International Space Station seems like something that could be done only from space, but taking a picture from your own backyard actually is easier than you might think.

If you have the right equipment, capturing your own photo of the space station from your hometown can be almost as easy as tracking it, and definitely more satisfying. NASA photographer Lauren Harnett, who took these photos, explained her technique for photographing the station with the moon as the background. But you can choose just about any landmark that is special to you to put in the foreground, as long as you are careful to ensure the lighting conditions are right.



NASA/PHOTO

The International Space Station can be seen as a small object in lower right of this image of the moon in the early evening of Jan. 4 in the skies over the Houston area, flying at an altitude of 242.8 miles.

Camera equipment needed

(This list represents what was used to take these photos; you can substitute your favorite gear.)

- Digital Single-Lens Reflex (DSLR) camera
- 600-mm lens (or the largest you have)
- 2X telephoto lens converter (amplifies lens)
- Trigger cable (minimizes camera shake)
- Tripod (heavy duty works best)
- Sandbag (keeps tripod stable)

Steps for photographing the space station with the moon

First, determine when the space station is flying over your area and decide where to set up your equipment to take the photos. It is helpful to know from which direction the station is coming. Sightings information and exact dates and times are available on NASA's SkyWatch website at: <http://spaceflight.nasa.gov/realdata/sightings/index.html>

Allow plenty of time for setup at your chosen location, as it may take some time to get the tripod perfectly adjusted.

Make sure you verify the location of the moon and that it is in the phase (full, crescent, etc.) you want. Set up the tripod and camera pointing

toward the moon. Adjusting the tripod may be tricky as tripod heads are not designed to tilt back to extreme angles for overhead shots. You may need to extend the two back legs of the tripod while keeping the front leg shorter to achieve the desired angle. Use the sandbag on the front leg to help balance the tripod.

Find the moon in the camera viewfinder, adjusting the tripod as needed.

"Clouds can make it tricky," Harnett said. "It can be a cat-and-mouse game finding the moon."

Harnett set her camera's shutter speed to 1/1600 of a second, aperture at f/8 and ISO to 2500. You may need to adjust your settings to let in more or less light depending on the size and brightness of the moon or your



NASA/PHOTO

Multiple images of the space station flying over the Houston area have been combined into one composite image to show the progress of the station as it crossed the face of the moon on Jan. 4.

foreground object, but this is a good starting point.

Use the High Continuous Burst setting to capture the most images per second. Setting the camera to save the photos in raw image format is best. Be sure to use the manual focus.

It is a good idea to take a few test shots to ensure everything is set as you want. A few minutes before the station is expected to fly over, check the viewfinder again to ensure the moon is still in the shot, as it also is moving across the sky.

The station will be easy to identify when it comes into view, as it is extremely bright and moves rather quickly. You can see it with the naked eye.

Once the space station is in the field of view (or close to it), press and hold down the cabled trigger release until the station leaves your field of view. Then check the photos on your camera to see if they turned out the way you wanted.

You are now ready to experiment with taking your own photos of the space station. If they don't turn out the way you want the first time, you can always try again. Then again, your photos may turn out so great, you'll want to take them every chance you get!



Spotlight: Mark Falls

Logistics Engineering Manager, NASA

Q: Coolest part of your job?

A: Developing logistics source data for Mission Operations Directorate station operation data files so the crew can remove and replace Orbital Replacement Units to support maintenance and on-orbit operations.

Q: Favorite hobbies or interesting things you do away from the office?

A: Fishing along the banks.

Q: What was your first job (not necessarily at NASA, but ever)?

A: Stocking groceries at Blodgett Food Market at 12 years old.

Q: If you could trade places with any other person for a week, famous or obscure, living or dead, real or fictional, who would it be?

A: Abraham Lincoln.

Q: What would people be surprised to know about you?

A: That I'm a church pastor, too.

Q: What would you like to learn more about if given the opportunity?

A: Different religions and cultures.

Q: What is your favorite indulgence?

A: The Oreo blizzard treat at Dairy Queen.

Q: Last good book or article you read?

A: "The Game Plan for Life" by Coach Joe Gibbs.

Q: What cosmic destination would you want to travel to if you were an astronaut?

A: The moon.

Q: What would we find in your refrigerator right now?

A: A lot of water, milk, fruits and cold cuts.

Q: What was your proudest moment?

A: The birth of my twins, Mark and Hannah.

Q: When did you first become interested in space and why?

A: In elementary school while watching the first moon walk on TV ... (and) because I wanted to be part of history.

Q: Describe yourself in three words.

A: Cares for others.

Q: Johnson Space Center turned 50 in September. Where do you hope to see NASA 50 years from now?

A: Involved more in commercialization and international partnerships to promote space exploration.

Q: In honor of Valentine's Day, what do you love most about JSC?

A: Meeting the needs or reaching out to employees during crucial times in their lives.



WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it's a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest "Spotlight" candidates, send your nomination to the JSC Roundup Office mailbox at jsc-roundup@mail.nasa.gov. Please include contact information and a brief description of why your nominee(s) should be considered.

Center Scoop

Hollywood lands at Johnson Space Center

On Jan. 5, a bit of Hollywood came to NASA as actors Terrence Howard, Nate Parker, David Oyelowo and director Anthony Hemingway took the opportunity to visit Johnson Space Center. The group was invited to tour the center by former astronaut Dr. Mae Jemison. These stars were in Houston promoting their new movie, "Red Tails," which focuses on the adventures of the renowned Tuskegee Airmen of World War II.

The actors chose to spend some of their day meeting

NASA/STAFFORD JSC2012E018245



NASA/STAFFORD JSC2012E018250



NASA/STAFFORD JSC2012E018286



modern-day aerospace professionals. While at JSC, they had the opportunity to get a T-38 orientation and interact with astronauts Greg Johnson, Alvin Drew and Eric Boe at Ellington Field. The group also toured astronaut training facilities such as the Neutral Buoyancy Laboratory to understand how training for spacewalks is conducted, and were able to get up close and personal with the space shuttle trainer in the Space Vehicle Mockup Facility.

NASA/STAFFORD JSC2012E018293



2012

JSC blood drive schedule

Give the gift of life in 2012. Mark your calendar for opportunities throughout the year to donate blood.



Feb. 14 - Ellington Field
Feb. 15 and 16 - JSC

April 18 and 19 - JSC

June 12 - Ellington Field
June 13 and 14 - JSC

Aug. 15 and 16 - JSC

Oct. 16 - Ellington Field
Oct. 17 and 18 - JSC

Dec. 11 - Ellington Field
Dec. 12 and 13 - JSC

Locations:

- Teague Auditorium lobby and donor coach at Building 11
7:30 a.m. to 4 p.m.
- Gilruth Recreation Center (inside) (Thursdays only)
7:30 a.m. to 4 p.m.
- Ellington Field - donor coach between Hangars 276 and 135
10 a.m. to 4 p.m.

<http://jscpeople.jsc.nasa.gov/bloodrv/bloodrv.htm>

Roundup

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A mock helicopter is poised for its “crash” into the waters of the NBL.

meet NASA standards. Petrofac will provide the HUET instruction and other water survival training to oil and gas company personnel, such as those who fly out to oil rigs in the Gulf of Mexico. Scheduled spacewalk training will take place simultaneously.

Before entering the pool, trainees are given a presentation on how to exit a helicopter that suffers a crash landing in the water, or what the trainers term a “controlled ditch.” Once in the pool, groups equipped with lifejackets and other gear participate in progressively more difficult escape scenarios. They begin egressing from a partially submerged vehicle and end with a cross-cabin egress in a fully submerged mock-up that has flipped over. Strong and weak swimmers alike participate, and a full complement of safety divers are on hand during the training.

A Public Affairs officer takes the plunge and lives to tell about it

“Brace for impact!”

The phrase is the last instruction the group of trainees received from our in-cabin instructor before our mock helicopter cabin slowly began to submerge in the NBL. The cue was the signal for each person in the group of four to locate the window next to us and ready one hand to push it out when the vehicle stopped moving—and prepare to release our four-point safety harness with the other hand.

The controlled ditching runs progressed slowly. In the first run, the vehicle submerged partially. We could still breathe above the water’s surface when we released the harness, pushed out the window and swam through it. But in successive runs, the vehicle slowly dipped under water and spun 180 degrees before egress took place. A primary concern for many participants was how long one should expect to hold his or her breath underwater—and how to time that last breath just right. Luckily, it was never more than a few seconds, and was always well before the sensation to take a breath approached. Safety divers were an arm’s length away to help along anyone having a bit of trouble.

The biggest downside? A bit of water up the nose when the cabin rotated 180 degrees. A highlight? Dipping your ear underwater to hear the spacewalk training taking place in the middle of the pool.



PHOTO COURTESY OF KELLY HUMPHRIES

Public Affairs Officer Rachel Kraft (center of the photo, foreground) flashes a big smile after escaping the submerged cabin.